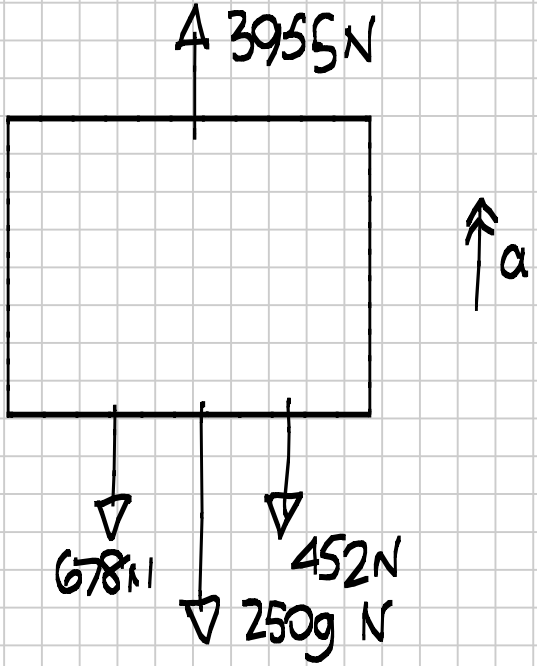
9 Albert & Bella in a lift. Lift has mass 250kg. Lift moves up with constant acceleration. Floor exerts forces 678N and 452N on Albert & Bella. Tension on cable pulling lift is 3955N

a find acceleration



treat the lift as a "black box"
(ie. ignore what's inside for now)

Net force up

$$F = 3955 - (678 + 452 + 250g)$$

↑ Newton III equal & opposite reaction ↑

$$F = 375$$

$$F = ma$$

$$375 = 250a$$

$$a = 1.5\ ms^{-2}$$